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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/075,552

02/13/2002

Ryuji Biro

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8407

27123 7590 04/11/2007
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EXAMINER

LU, JIPING

ART UNIT

PAPER NUMBER

3749

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.		Applicant(s)	
	10/075,552		BIRO ET AL.	
	Examiner		Art Unit	
	Jiping Lu		3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/18/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims Status

1. Claims 1-33 have been canceled. Claims 34-37 are pending.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claim 34 is rejected under 35 U.S.C. 103 as unpatentable over Mukai (U.S. Pat. 5,120,394).

Mukai shows a process by placing an article 11 to be rinsed in an inner container 2 (2nd container), adding gas 15-24 into the second container 2, irradiating the article 11 with ultraviolet rays 12 from a light source 3 outside of the second container 2 and introducing N₂ gas 8, 9 into the second container 2. The examiner has considered the room that is housing the apparatus (Fig. 1) is the outer container or 1st container. Valves 19, 20 are provided and intended to stop any introduction of gas or ozone gas 15-24. Therefore, it would have been obvious to operate the valves 19, 20 to stop introduction of oxygen or ozone gas, as one desire.

4. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya (U.S. Pat. 4,989,031) in view of Mukai (U.S. Pat. 4,989,031).

Kamiya shows a rinsing method comprising providing a first container I, a light emitting unit 1, 11, 12 disposed inside the first container I for emitting laser lights, a second container II, III disposed inside the first container I and being adapted to accommodate an article

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2, 4 to be rinsed, the second container II, III having a clearance through the first container I (see Fig. 1), a first gas supplying means 31, 32 for introducing a rinsing gas into the second container II, III to maintain an ambience of the second container which ambience is different from that of the first container and also to keep an internal pressure higher than that of the first container I (col. 4, lines 18-25). However, Kamiya does not show irradiating the article with ultraviolet rays and adding N₂ gas in the inner container. Mukai teaches a concept of using ultraviolet light generator for irradiating a laser ray (wavelength: 193 nm) over the surface of substrate 11 (col. 5, lines 6-9) and introducing N₂ gas 8, 9 into the inner (second) container same as claimed.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify method of Kamiya to include a step of supplying ultraviolet rays and N₂ gas to the inner container as taught by Mukai in order to more efficiently clean the articles inside the second container. With regard to the claimed limitations "stopping introduction of oxygen gas or ozone gas", it is deemed to be obvious matter in Kamiya patent because the supply of rinsing gas 31, 32 can be controlled and stopped by heat exchanger 30.

With regard to the claimed material of the article to be cleaned, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the article with any kind of material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

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5. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiya (U.S. Pat. 4,989,031) in view of Shiramizu et al. (U.S. Pat. 6,277,767).

Kamiya shows a rinsing system and a method comprising a first container I, a light emitting unit 1, 11, 12 disposed inside the first container I for emitting laser lights, a second container II, III disposed inside the first container I and being adapted to accommodate an article 2, 4 to be rinsed, the second container II, III having a clearance through the first container I (see Fig. 1), a first gas supplying means 31, 32 for introducing a rinsing gas into the second container II, III to maintain an ambience of the second container which ambience is different from that of the first container and also to keep an internal pressure higher than that of the first container I (col. 4, lines 18-25). However, Kamiya does not show irradiating the article with ultraviolet rays and adding oxygen gas into the inner container. Shiramizu et al. teaches a concept of using an ultraviolet light 4 having a wavelength of 172 nm for irradiating ultraviolet light over the surface of substrate 5 and introducing oxygen gas 8 into the container 2 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system and method of Kamiya to include a step of supplying ultraviolet rays and oxygen gas to the container that contains an article to be cleaned as taught by Shiramizu et al. in order to more efficiently clean the articles inside the container. With regard to the claimed limitations "stopping introduction of oxygen gas or ozone gas", it is deemed to be obvious matter in Kamiya patent because the supply of rinsing gas 31, 32 can be controlled and stopped by heat exchanger 30. With regard to the claimed material of the article to be cleaned, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the article with any kind of material, since it has been held to be within the general skill of a

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worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

6. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (U. S. pat. 6,571,057) in view of Matsumoto et al. (U. S. Pat. 5,430,303).

The invention of Aoki presents an optical element (39a-f) which is made from quartz or fluoride (col. 6, lines 43-52). The optical element is disposed in a container for the purpose of subjecting the element to a rinsing system and method. The rinsing method comprises arranging a light-emitting unit 20 and a container 53b so that the light-emitting unit 20 is outside the container 53b. The container 53b, which houses the optical element, enables irradiation from the light emitting unit 20 to enter the container 53b through a glass window 38 located on the container 53b. Aoki further presents an expose device for manufacturing and preparing photosensitive members and optical elements (col. 20, lines 53-67; and col. 21, lines 40-62) and teaches filling the apparatus with an inactive gas while the irradiation is transmitted to the container (col. 7, lines 21-27). As the irradiation rinses the optical element with ultraviolet rays from the light-emitting unit 20, the container 53b is filled with a gas containing oxygen (col. 8, lines 21-40). However, Aoki does not teach the container 53b being disposed inside of and having an internal pressure higher than an outer container. Matsumoto et al. teaches a similar method and apparatus for irradiating comprising processing chamber 6a disposed inside an outer chamber 6 (col. 7, lines 9-15). As Matsumoto et al. teaches that having an inner chamber will keep more impurities from affecting processing; it would have been obvious to one of ordinary skill in the art to modify the irradiating apparatus and method of Aoki with the inner and outer chambers of Matsumoto et al. Matsumoto et al. further teaches controlling the pressure of inner

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chamber 6a depending on desired processing constraints (col. 6, line 61- col. 7, line8). While Matsumoto et al. does not explicitly teach inner chamber 6a having a pressure higher than that of outer chamber 6, such a limitation would have been obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. With regard to the claimed limitations “stopping introduction of oxygen gas or ozone gas”, it is deemed to be obvious matter in Aoki patent because the supply of rinsing gas 53b can be controlled and stopped.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

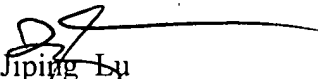
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KENNETH RINEHART can be reached on 571 272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jiping Lu
Primary Examiner
Art Unit 3749

J. L.